B-Glucosidase Matrix

Figure 1. Enzymatic activity assay for a matrix containing β-Glucosidase.

Penicillinase assay
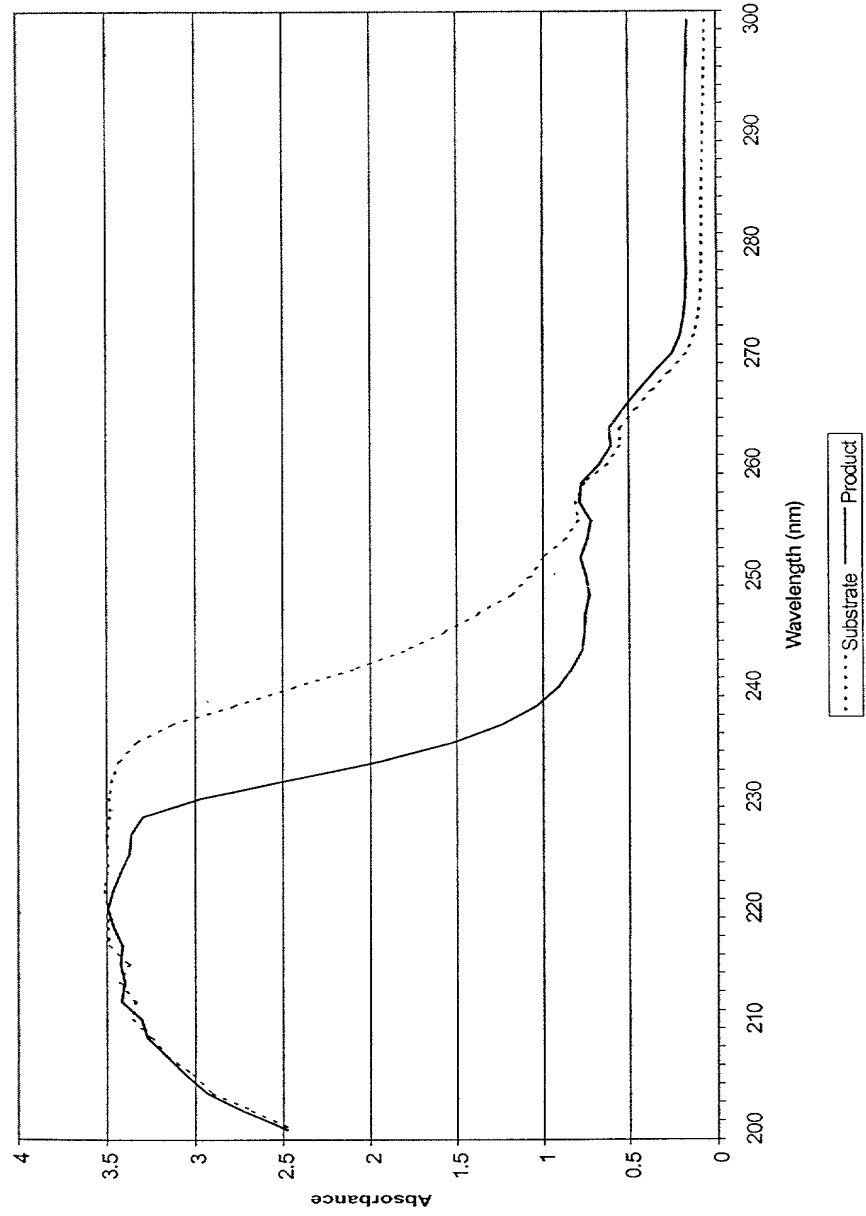

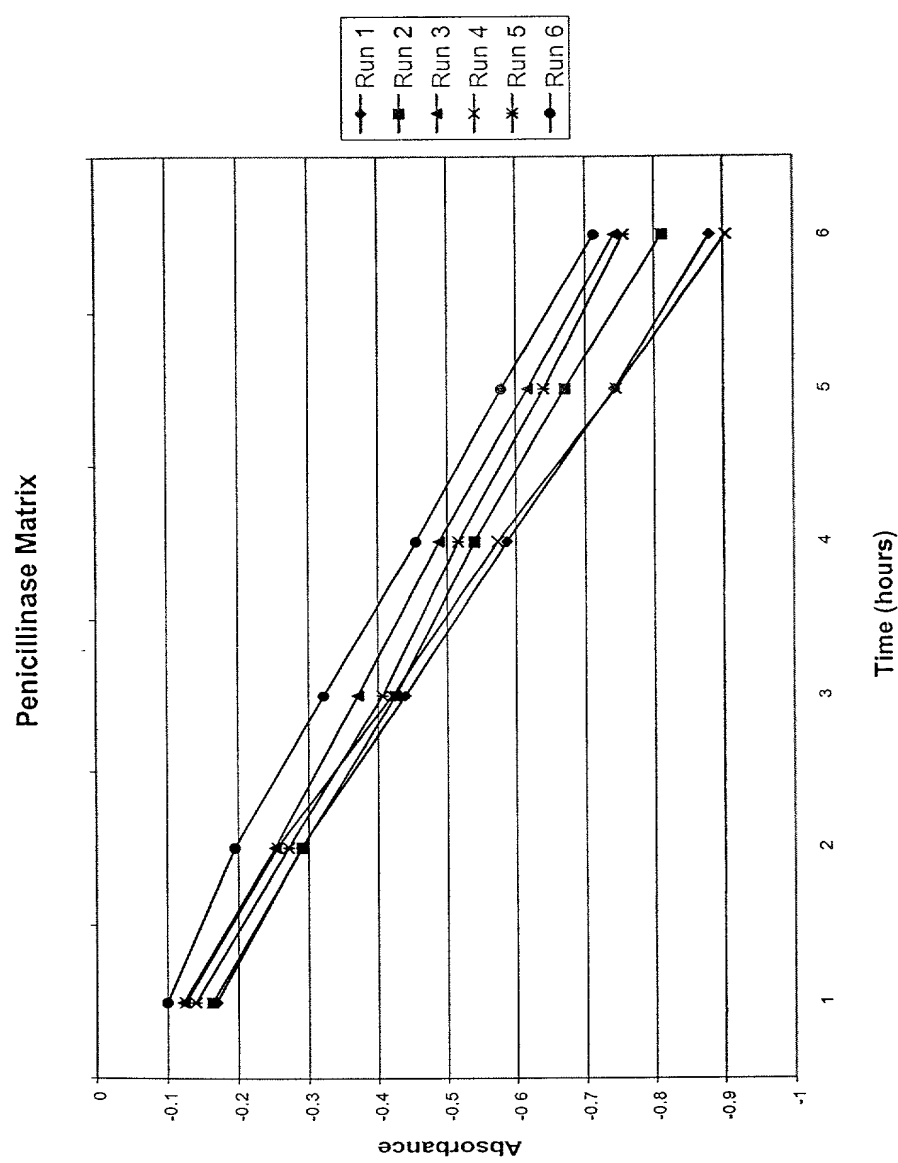**Figure 2.** Substrate and product spectra for penicillinase assay.

Figure 3(a). Penicillinase activity assays showing (a) multiple assays of a single matrix and (b) a single assay performed on each of five matrices from one batch preparation.
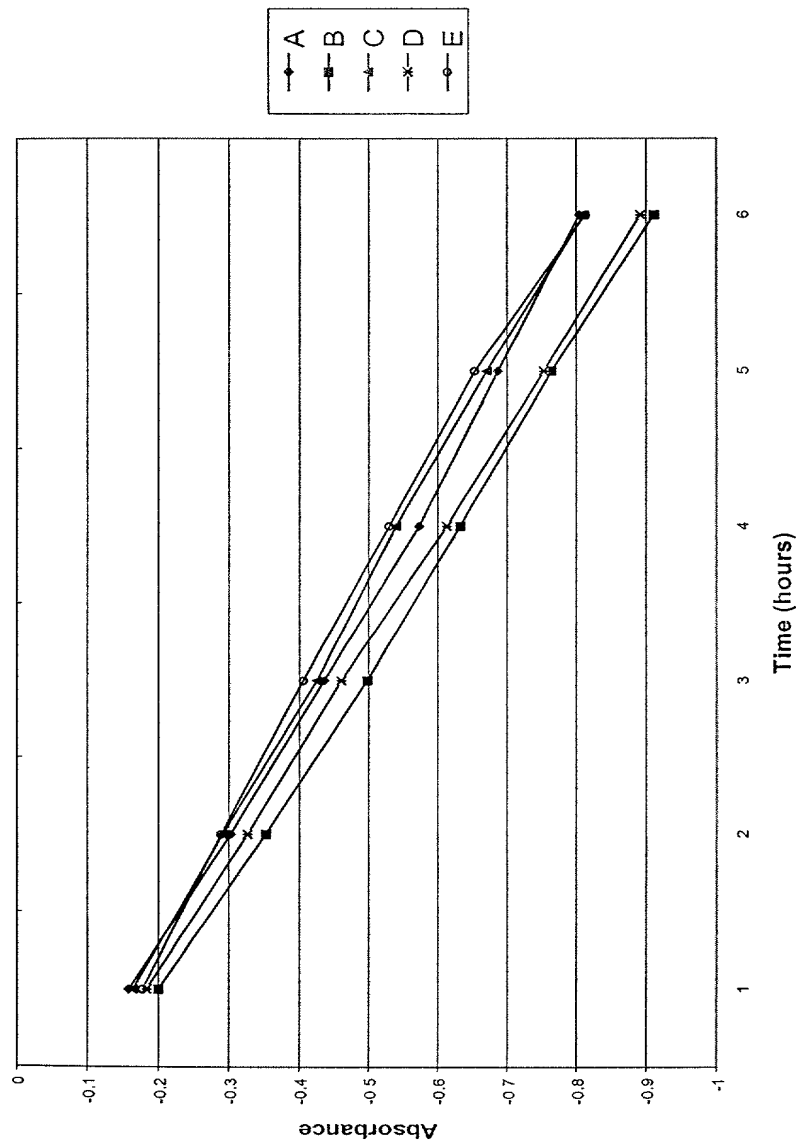
Penicillinase Matrices

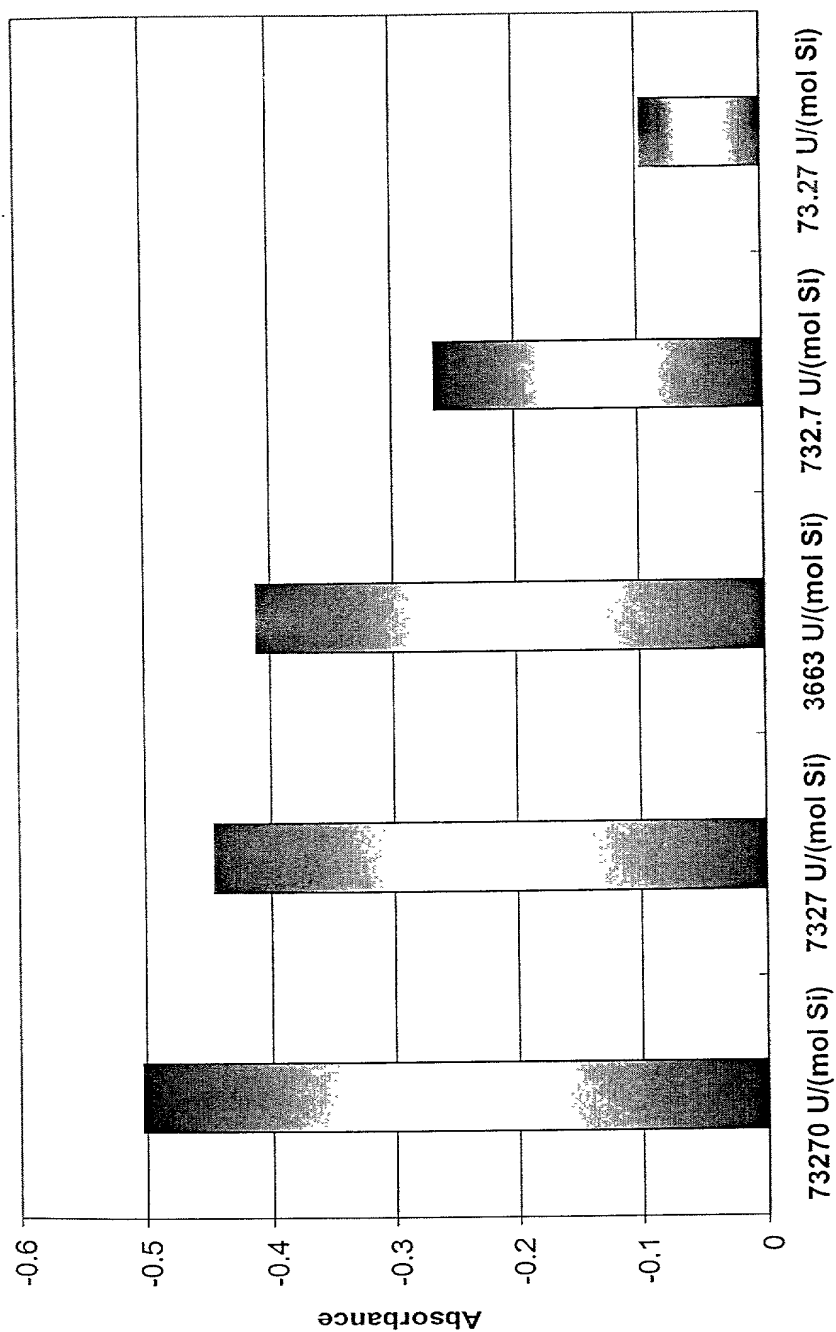**Figure 3(b).** See the legend directly above.

Figure 4. Change in absorbance at three hours as a function of the enzyme concentration added to the matrix during preparation.
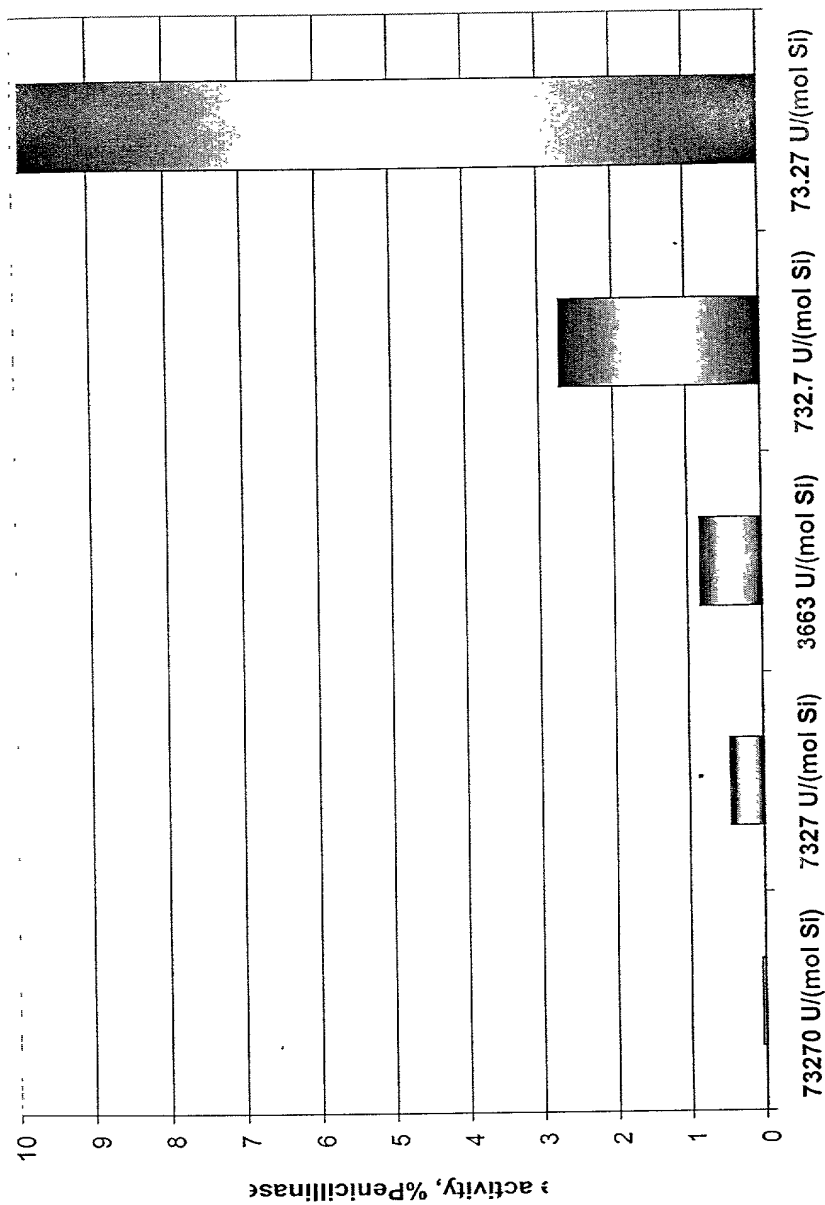
Figure 5. Yield of immobilized enzyme in penicillinase-containing sol-gel matrices. (Observed activity was calculated as the percentage of enzyme activity used in the preparation of the matrices).

Penicillinase Matrices (monoliths)

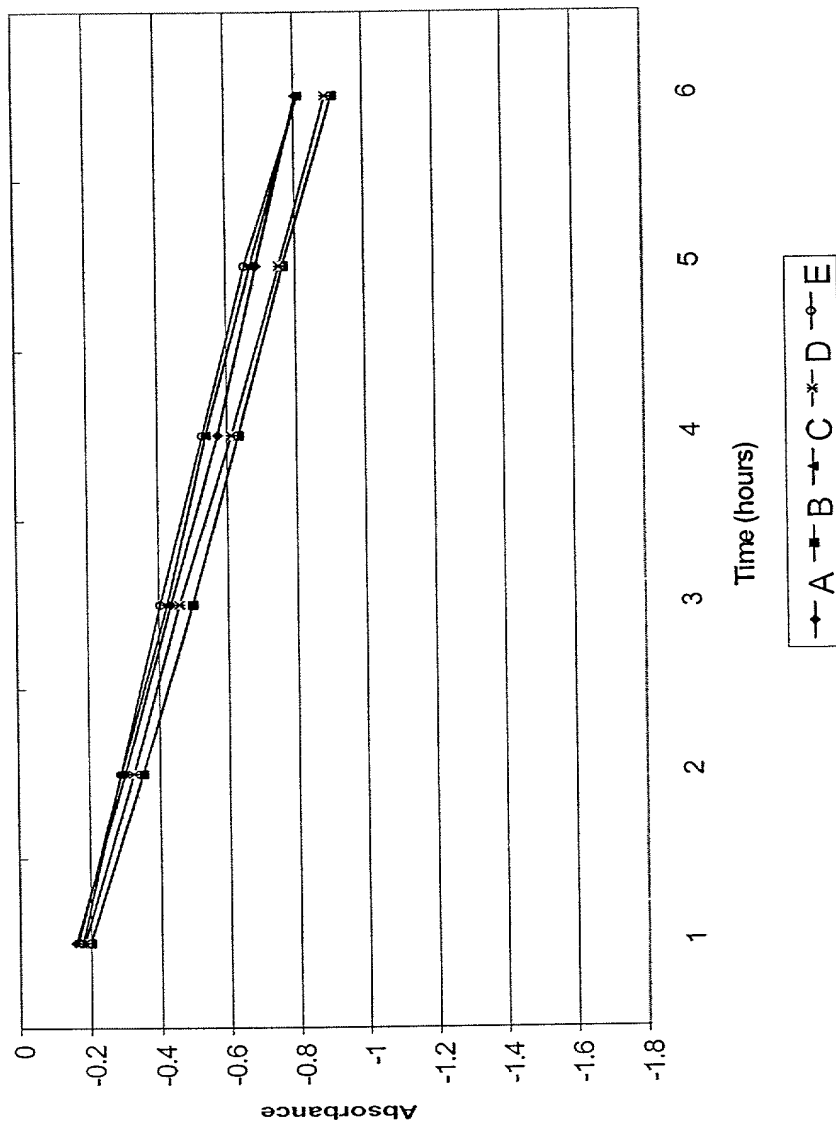Legend: A · B · C · D · E

X-axis: Time (hours)
Y-axis: Absorbance

Figure 6(a). Activity of crushed and whole matrices containing penicillinase. Each figure shows data for five unique matrices assayed one time each.
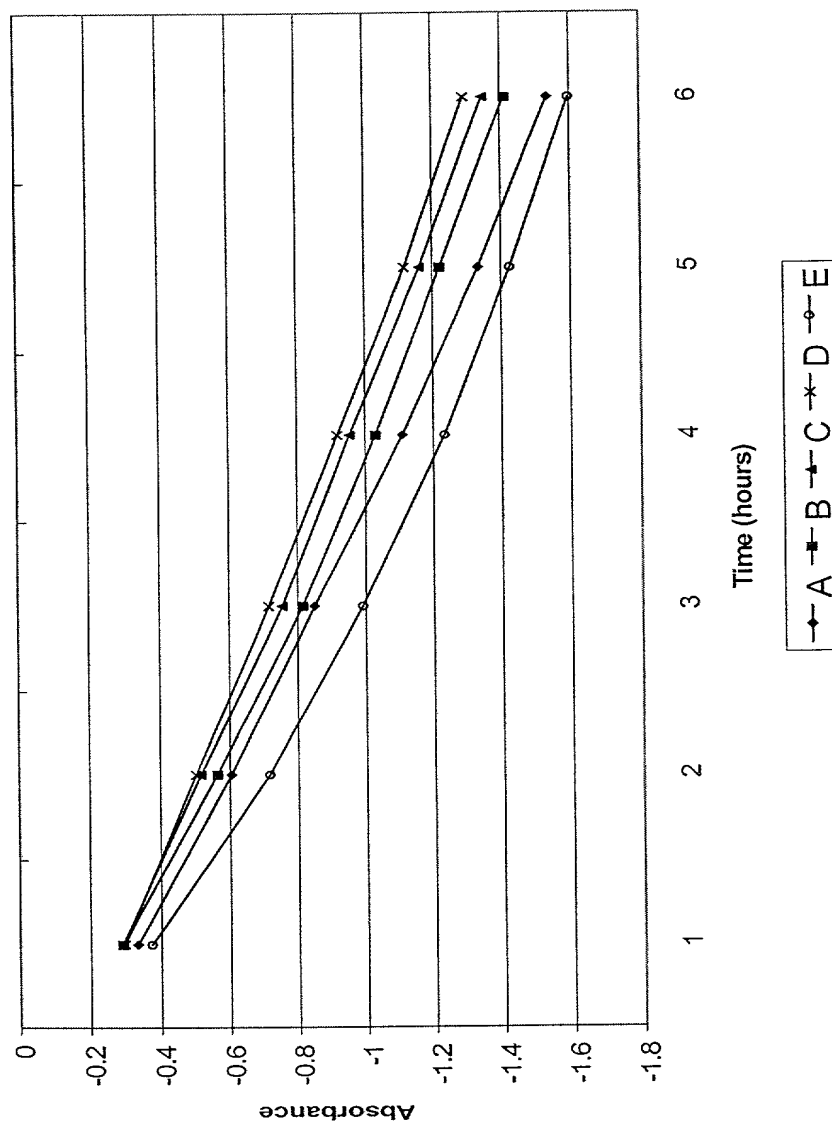
Penicillinase Matrices
(crushed monoliths)

Absorbance

Time (hours)

→ A → B → C → D → E
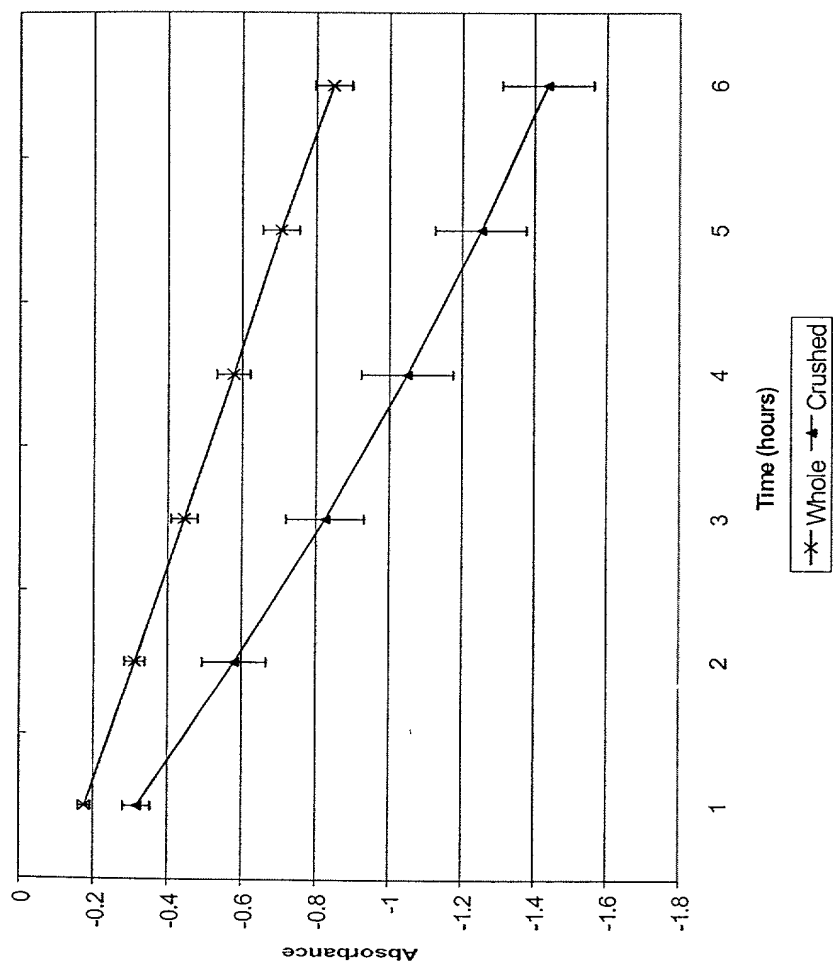
Figure 6(b). See legend directly above.

Figure 7. Penicillinase activity in whole monoliths and crushed matrices with points shown being the mean of five measurements (error bars +/- one standard deviation).
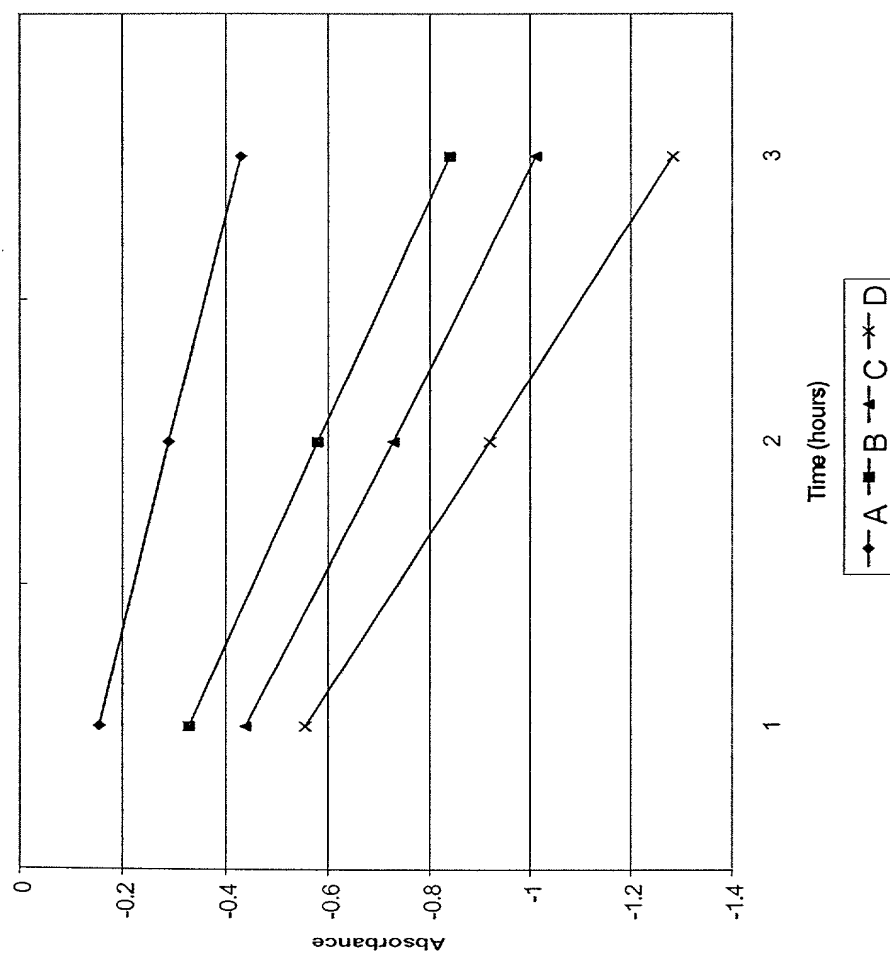
Figure 8(a). (a) Activity of penicillinase-containing matrices with varying surface areas and (b) activity as a percentage of the activity added in preparation. Surface areas corresponding to the labeling in the graphs are: A = 15.1 cm², B = 39.2 cm², C = 71.3 cm² and D = 135 cm²..
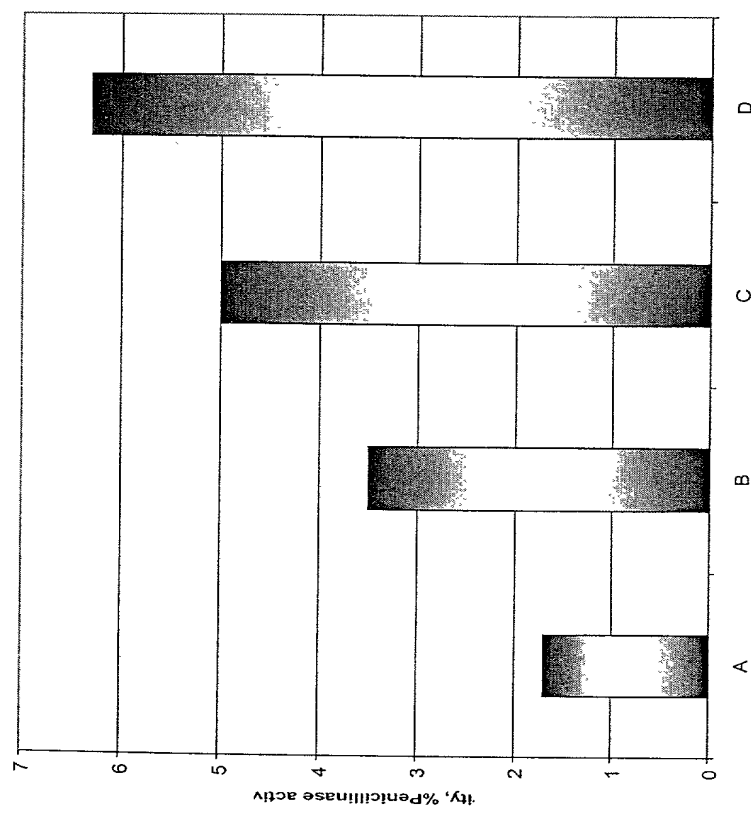
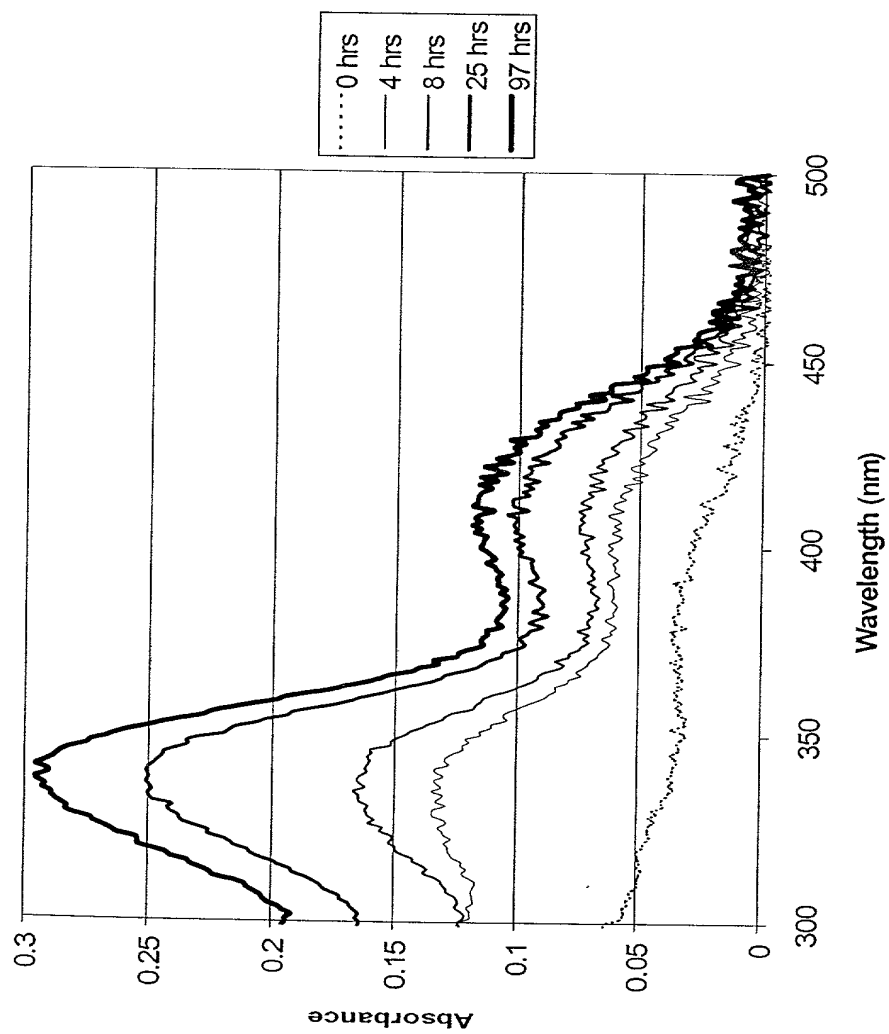**Figure 8(H).** See legend directly above.

Figure 9. Tyrosine decarboxylase activity assay; elapsed time since gel cast 19.5h.
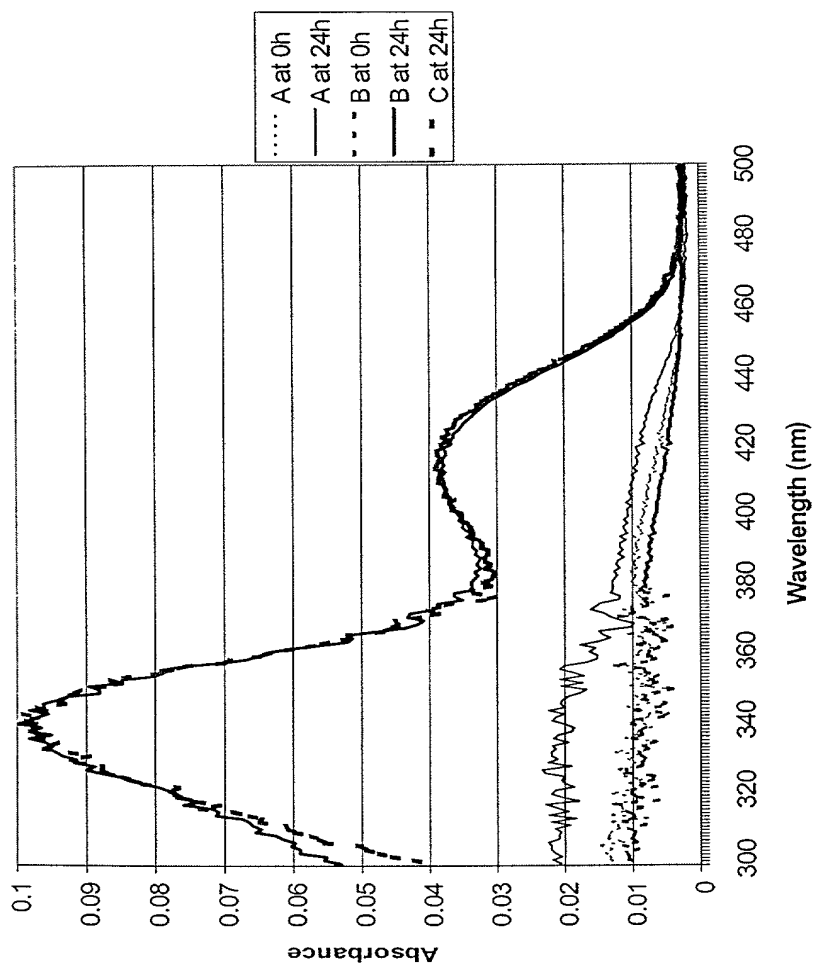
Figure 10, Tyrosine decarboxylase activity assay of two identical 16 day old matrices, A and B, with comparison to C (same matrix composition aged 19h, no cofactor present). Assay of A is performed in the absence of pyridoxal-5-phosphate (cofactor) while B is performed with cofactor present.